

U.S. Environmental Protection Agency, Region 9

UNDERGROUND INJECTION CONTROL

DRAFT INDIVIDUAL PERMIT

Class V Injection
Permit No. HI50710003

Lahaina Wastewater Reclamation Facility (LWRF)
3300 Honoapiilani Highway
Lahaina, HI 96791

Issued to:

Maui County, Department of Environmental Management
200 South High Street
Wailuku, HI 96793

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APPENDIX A – INJECTION WELL SCHEMATICS

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PART I. AUTHORIZATION TO OPERATE

Pursuant to the Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, 147, and 148.

Maui County, Department Environmental Management
200 South High Street
Wailuku, Maui, HI 96793

is hereby authorized to operate four (4) Class V municipal waste water injection wells identified as LWRF No. 1-4 located at:

Lahaina Wastewater Reclamation Facility
3300 Honoapiilani Highway
Lahaina, HI 96791

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, 147 and 148 of the Code of Federal Regulations and are regulations that are in effect on the date that this permit is effective.

This permit consists of seventeen (17) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. It is the responsibility of the permittee to read and understand all provisions of this permit.

This permit is issued for a period of ten (10) years unless terminated under the conditions set forth in Part III, Section B of this permit.

Issued this _____ day of _____

This permit shall become effective _____

Alexis Strauss, Director
Water Management Division, EPA Region 9

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONSTRUCTION

1. Casing and Cementing

The following specifications apply to the injection wells. Schematic diagrams of the injection wells are attached as Appendix A.

Injection Well No. 1: The 20-inch (inner diameter), solid steel casing extends to a depth of 85 feet below ground surface (bgs). The 14-inch (I.D.) perforated steel casing extends from the bottom of the solid casing to a total well depth of 200 feet bgs. The 20-inch surface string is cemented from the bottom of the casing to the top with the cement returned to surface.

Injection Well No. 2: The 20-inch (I.D.), solid steel casing extends to a depth of 85 feet bgs. Open hole extends from the bottom of the solid casing to a total well depth of 180 feet bgs. The 20-inch surface string is cemented from the bottom of the casing to the top with the cement returned to surface.

Injection Well No. 3: The 20-inch (I.D.), solid steel casing extends to a depth of 105 feet, bgs. Open hole extends from the bottom of the solid casing to a total well depth of 225 feet bgs. The 20-inch surface string is cemented from the bottom of the casing to the top with the cement returned to surface.

Injection Well No. 4: The 20-inch (I.D.), solid steel casing extends to a depth of 105 feet bgs. The 14-inch (I.D.) perforated steel casing extends from the bottom of the solid casing to a total well depth of 255 feet bgs. The 20-inch surface string is cemented from the bottom of the casing to the top with the cement returned to surface.

2. Injection Intervals

Injection into the intended zones will be through the perforated casing and open boreholes of the well below the solid steel casing and cement. Alteration of the injection perforations and other rework operations must be properly reported (EPA Form 7520-12).

3. Monitoring Devices

Pursuant to 40 CFR §§144.51(h) and 144.52(a)(9) in order to prevent the migration of injected fluids into Underground Sources of Drinking Water (USDW), the operator shall maintain in good operating condition:

- a. effluent distribution box capable of producing representative samples of the injection fluids;
- b. a continuously recording flow meter, (with measured cumulative volumes), that are certified for a deviation accuracy of five (5) percent or

less throughout the range of injection rates allowed by the permit;

4. Proposed Changes and Workovers

The permittee shall give advance notice of at least seven (7) days to the EPA of any planned physical alterations to the wells that have already been approved by EPA. Any changes in well construction will require prior approval of the EPA and either a major or minor permit modification under the requirements of 40 CFR §§ 144.39 and 144.41. The permittee shall provide a completed well rework form (see Appendix B) and all records of well workovers, logging, or other subsequent test data to EPA within sixty (60) days of completion of the activity.

B. CORRECTIVE ACTION

No corrective action for wells located within the Area of Review will be required pursuant to 40 CFR §§ 144.55 and 146.7.

C. WELL OPERATION

1. Mechanical Integrity

The injection wells covered by this permit are not subject to Mechanical Integrity Testing at this time. However, the permittee will be required to submit a copy of the semi-annual "Injection Well Status" reports required by the Hawaii Department of Health.

2. Injection Pressure Limitation

- a. The facility currently injects using gravity flow.
- b. If the facility chooses to inject under pressure, an injection pressure limit will be calculated based on the results of appropriate tests.
- c. Any approval granted by the EPA for the increased pressure limitations as stated in paragraph (b) shall be made part of this permit by minor modification.

3. Injection Volume (Rate) Limitation

The total injection rate at the facility **shall not** exceed the following:

- a. An average injection rate of 9.0 million gallons per day (mgd) for any calendar week.
- b. A maximum rate of 19.8 mgd for any one day.

4. Injection Fluid Limitations

- a. The permittee shall not inject any hazardous wastes as defined by

40 CFR § 261, at any time during the operation of the facility.

- b. Injection fluid **shall only consist** of treated wastewater generated from the LWRF and typical chemicals associated with the cleaning of the injection wells.
- c. If a fluid, other than those described in paragraph (b) above, will be injected, the permittee shall report this to the EPA at least thirty (30) days prior to the injection of the fluid.
- d. Biochemical Oxygen Demand (BOD₅) for any sample shall not exceed 60 mg/l.
- e. Suspended Solids for any sample shall not exceed 60 mg/l.
- f. The Total Nitrogen action level is 10 mg/l. If the action level is exceeded as specified below, then the following actions are triggered.
 - i. When any two consecutive samples, or any three samples out of ten consecutive samples, of the injected wastewater exceed a Total Nitrogen concentration of 10 mg/liter, the permittee shall evaluate the cause of this. The permittee shall prepare and submit a report to EPA explaining the findings of the permittee's evaluation.
 - ii. When any three consecutive samples, or any four samples out of ten consecutive samples, of the injected wastewater exceed a Total Nitrogen concentration of 10 mg/liter, the permittee shall evaluate the remedial measures needed to reduce Total Nitrogen concentrations. The permittee shall prepare and submit a report to EPA recommending methods for reducing Total Nitrogen concentrations in the injected wastewater and a time schedule for implementing these methods. This report shall specify implementation of the best treatment or other Total Nitrogen reduction technology/operations that is technically and economically feasible. The permittee shall implement these methods according to the specified time schedule.

D. MONITORING, RECORDKEEPING AND REPORTING OF RESULTS

- 1. Injection Well Monitoring Program
Measurements shall be representative of the monitored activity. Injection rate/flow rate shall be measured in the supply line immediately before the wellhead. Reporting shall consist of average, maximum, and minimum daily and monthly values for flow rate and volume.
- 2. Injection Fluid Monitoring Program

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The permittee shall utilize the applicable analytical methods described in Tables IA-IF of 40 CFR § 136.3, or in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," or in certain circumstances, other methods that have been approved by the EPA. The methods used to obtain a representative sample of the fluid to be analyzed and the procedure for analysis of the sample are as follows:

- a. Grab samples shall be collected at the effluent distribution box and used for laboratory analysis of physical and chemical characteristics.
- b. 24-hour composite samples shall be collected at the sampling effluent distribution box and used for laboratory analysis of Total Nitrogen concentrations.

3 Injection Fluid Analysis

The County of Maui shall submit a copy of analytical results required by the State of Hawaii, Department of Health UIC permit monitoring list. The following parameters shall be monitored with the following frequency and sampling method.

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
specific gravity, unit-less	semi-annually	24-Hour Composite
Total Hardness	semi-annually	" "
Calcium	semi-annually	" "
Chloride	semi-annually	" "
Copper	semi-annually	" "
Fluoride	semi-annually	" "
Magnesium	semi-annually	" "
Total Alkalinity	semi-annually	" "
Potassium	semi-annually	" "
Silica	semi-annually	" "
Sodium	semi-annually	" "
Sulfate	semi-annually	" "
Vanadium	semi-annually	" "
Zinc	semi-annually	" "
Phenol	semi-annually	" "
Total Nitrogen	weekly	" "

4 Injection Fluid Monitoring Data

<u>Parameter</u>	<u>Monitoring</u>	<u>Instrument</u>
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	<u>Frequency</u>	
injection rate, gpm	Continuous	Recorder
injection total volume, gallons	Continuous	Totalizer

5 Calibration of Monitoring Equipment

All monitoring and recording equipment shall be calibrated on a regular basis. The permittee shall submit, to the EPA, a report describing the calibration procedures and the frequency at which the equipment will be calibrated

6 Automatic Alarms and Shut-Off Devices

The permittee shall continuously operate and maintain an automatic warning system which will immediately notify the operators of a malfunction of monitoring equipment.

7 Monitoring Information

Records of any monitoring activity required under this permit shall include:

- a. The date, exact place, and time of sampling or field measurements;
- b. The name of the individual(s) who performed the sampling or measurements;
- c. The exact sampling method(s) used to take samples;
- d. The date(s) laboratory analysis were performed;
- e. The name of the individual(s) who performed the analyses;
- f. The analytical techniques or methods used by laboratory personnel; and
- g. The results of such analyses.
- h. Chain of custody records.

8 Recordkeeping

- a. The permittee shall retain records concerning:
 - i. the nature and composition of all injected fluids until three (3) years after the well has been plugged and abandoned.
 - ii. all monitoring information, including all calibration and maintenance records and all SCADA recordings used for continuous monitoring and copies of all reports required by this permit for a period of at least five (5) years from the date of the sample, measurement or report throughout the operating life of the

injection wells.

- b. The permittee shall continue to retain such records after the retention period specified in paragraphs 8 a.i. and 8 a.ii. unless it delivers the records to the Director or obtains written approval from the Director to discard the records.
- c. The permittee shall maintain copies (or originals) of all pertinent observation records available for inspection at the facility.

9 Reporting of Results

The permittee shall submit short and accurate quarterly reports to the Director containing the following information:

- a. results of the injection fluid analyses specified in permit condition Part II, Section D, Item 3.
- b. average, maximum, and minimum daily and monthly values for the continuously monitored parameters specified in Part II, Section D, Item 4.
- c. equipment calibration.
- d. a narrative description and explanation of all noncompliance that occurred during the reporting period.
- e. any reports specified in permit condition Part II, Section C, Items 4.f.i. and 4.f.ii.

Monitoring results obtained during each calendar month shall be summarized for each month and reported on EPA Form 7520-8. Forms shall be submitted for the reporting periods by the respective due dates as listed below:

<u>Reporting Period</u>	<u>Report Due</u>
Jan, Feb, Mar	Apr 30
Apr, May, June	Jul 30
July, Aug, Sept	Oct 30
Oct, Nov, Dec	Jan 30

Copies of the monitoring results and all other reports required by this permit shall be submitted to the following address:

U.S. Environmental Protection Agency
Ground Water Office, Mail Code: WTR-9
75 Hawthorne St.
San Francisco, CA 94105

E. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment

The permittee shall notify the EPA no later than 45 days before further conversion, workover, or abandonment of the well. The EPA may require that the plugging and abandonment be witnessed by an EPA representative.

2. Plugging and Abandonment Plan

The permittee shall abandon the wells according to the Plugging and Abandonment Plans in Appendix C. The permittee must also comply with the abandonment conditions required by county and state agencies. The EPA reserves the right to change the manner in which the well will be plugged if the well is modified during its permitted life or if the well is not consistent with EPA requirements for construction or mechanical integrity. The EPA may ask the permittee to estimate and to update the estimated plugging cost periodically. Such estimates shall be based upon costs which a third party would incur to plug the well according to the plan.

3. Plugging and Abandonment Report

Within sixty (60) days after plugging the well, the permittee shall submit a report on Form 7520-13 to the EPA. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement specifying the different procedures followed.

4. Cessation of Injection Activities

After a cessation of injection of two (2) years, the permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, unless it:

- a. provides notice to the EPA; and
- b. has demonstrated that the well will be used in the future, and
- c. has described actions or procedures, satisfactory to the EPA, that will be taken to ensure that the well will not endanger USDWs during the period of temporary abandonment.

F. FINANCIAL RESPONSIBILITY

1. Demonstration of Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation as provided in the plugging and abandonment plan.

- a. The permittee has provided proof of the County of Maui's bond rating using the Standard and Poor's rating system. The permittee shall maintain a bond rating within the four highest categories of Standard and Poor's AAA, AA, A, or BBB.
- b. Demonstration of financial responsibility must be provided to the EPA every year by March 31.

2 Instrument of Financial Responsibility

If the most recent bond rating does not fall within the four highest categories, then the permittee shall submit an instrument of financial responsibility acceptable to the Director.

PART III. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection well operation in accordance with the conditions of this permit. The permittee, authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 141 or may otherwise adversely affect the health of persons. Furthermore, any underground injection activity not specifically authorized in this permit is prohibited. Compliance with this permit during its term constitutes compliance for purposes of enforcement with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA, or any other common or statutory law other than Part C of the SDWA. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination

The EPA may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR §§ 124.5, 144.12, 144.39, and 144.40. Also, the permit is subject to minor modifications for cause as specified in 40 CFR § 144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition. The EPA may also modify, revoke and reissue, or terminate this permit in accordance with any amendments to the SDWA if the amendments have applicability to this permit.

2. Transfer of Permits

This permit is not transferable to any person except after notice is provided to the EPA and the permittee complies with the requirements of 40 CFR § 144.38. The EPA may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit

shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR §§ 2 and 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice.

E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply

The permittee shall comply with all applicable UIC Program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with 40 CFR § 144.34. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

2. Penalties for Violations of Permit Conditions

Any person who violates a permit requirement is subject to civil penalties and other enforcement action under the SDWA and may be subject to such actions pursuant to RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Need to Halt or Reduce Activity not a Defense

It shall not be a defense, for the permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize and correct any adverse impact on the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve

compliance with the conditions of this permit.

6. Duty to Provide Information

The permittee shall furnish to the EPA, within a time specified, any information which the EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the EPA, upon request, copies of records required to be kept by this permit.

7. Inspection and Entry

The permittee shall allow the EPA, or an authorized EPA representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;
- b. have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- c. inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

8. Records of the Permit Application

The permittee shall maintain records of all data required to complete the permit application and any supplemental information submitted for a period of five (5) years from the effective date of this permit. This period may be extended by request of the EPA at any time.

9. Signatory Requirements

All reports or other information requested by the EPA shall be signed and certified by a responsible corporate officer or duly authorized representative according to 40 CFR § 144.32.

10. Reporting of Noncompliance

a. Anticipated Noncompliance

The permittee shall give advance notice to the EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

b. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than thirty (30) days following each schedule date.

c. Twenty-four Hour Reporting.

- i. The permittee shall report to the EPA any noncompliance which may endanger health or the environment. Information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to: **(415) 972-3971.**

The following shall be included as information which must be reported orally within 24 hours:

- A. any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.
- B. any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water.
- ii. A written submission shall also be provided to the EPA within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

d. Other Noncompliance

The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part III, Section E.10.(c)(ii) of this permit.

e. Other Information

Where the permittee becomes aware that it failed to submit all relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within two (2) weeks of the time such information becomes known.

11. Continuation of Expiring Permits

a. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 180 days before this permit expires.

b. Permit Extensions

The conditions of an expired permit may continue in force in accordance with Title 5 United States Code (U.S.C.) 558(c) until the effective date of a new permit, if:

- i. the permittee has submitted a timely application which is a complete application for a new permit;
- ii. The EPA, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit; and
- iii. The new permit has not been denied, and if a denial has been appealed, the denial has not been upheld on appeal. (The appeal is still pending or has resulted in a reversal of the denial of the new permit application.)

APPENDIX A - INJECTION WELL SCHEMATICS

APPENDIX B - WELL REWORK REPORTING FORM

APPENDIX C - PLUGGING AND ABANDONMENT PLANS

Upon completion of injection activities, a well will be plugged and abandoned according to the following plans and to State and Federal regulations to ensure protection of Underground Sources of Drinking Water (USDW).